

SEQUENCE LISTING

<110> Busfield, S.
 Villeval, J.
 Jandrot-Perrus, M.
 Vainchenker, W.

<120> GLYCOPROTEIN VI AND USES THEREOF

<130> 7853-178

<140>

<141>

<150> 09/345,468

<151> 1999-06-30

<160> 24

<170> FastSEQ for Windows Version 3.0

<210> 1

<211> 2047

<212> DNA

<213> Homo sapiens

<400> 1

ggagtcgacc	cacgcgtccg	cagggctgag	gaaccatgtc	tccatccccg	accgcectct	60
tctgtcttgg	gctgtgtctg	gggcgtgtgc	cagcgcagag	tggaccgctc	cccaagccct	120
ccctccaggc	tctgcccagc	tccttggtgc	ccctggagaa	gccagtgaac	ctccggtgcc	180
agggacctcc	gggcgtggac	ctgtaccgcc	tggagaagct	gagttccagc	aggtaccagg	240
atcaggcagt	cctcttcata	ccggccatga	agagaagctc	ggctggacgc	taccgctgct	300
cctaccagaa	cggaagcctc	tggtccttgc	ccagcgacca	gctggagctc	gttgccacgg	360
gagtttttgc	caaaccctcg	ctctcagccc	agcccggccc	ggcgggtgtc	tcaggagggg	420
acgtaaccct	acagtgtcag	actcggtatg	gctttgacca	atttgcctcg	tacaaggaag	480
gggaccctgc	gccctacaag	aatcccagaa	gatggtaccg	ggctagtctc	cccatcatca	540
cggtgaccgc	cgcccacagc	ggaacctacc	gatgctacag	cttctccagc	agggacccat	600
acctgtgggt	ggccccacgc	gacccccctg	agcttgtggt	cacaggaacc	tctgtgacct	660
ccagccgggt	accaacagaa	ccaccttcc	cggtagcaga	attctcagaa	gccaccgctg	720
aactgaccgt	ctcattcaca	aacaaagtct	tcacaactga	gacttctagg	agtatcacca	780
ccagtccaaa	ggagtcagac	tctccagctg	gtcctgcccg	ccagtactac	accaagggca	840
acctgggtcc	gatatgcctc	ggggctgtga	tcctaataat	cctggcgggg	tttctggcag	900
aggactggca	cagccggagg	aagcgcttgc	ggcacagggg	cagggctgtg	cagaggccgc	960
ttccgcccct	gccgcccctc	ccgcagacct	ggaaatcaca	cggggggtcag	gatggaggcc	1020
gacaggatgt	tcacagccgc	gggttatgtt	catgaccgct	gaaccccagg	cacggtcgtg	1080
tccaagggag	ggatcatggc	atgggaggcg	actcaaagac	tggcgtgtgt	ggagcgtgga	1140
agcaggaggg	cagaggctac	agctgtggaa	acgaggecat	gctgcctcct	cctggtgttc	1200
catcaggggg	cgttcggccc	agtgtctgtc	tgtctgtctg	cctctctgtc	tgagggcacc	1260
ctccatttgg	gatggaagga	atctgtggag	accccatcct	cctccctgca	cactgtggat	1320
gacatggtac	cctggctgga	ccacatactg	gcctctttct	tcaacctctc	taatatgggc	1380
tccagacgga	tctctaaggt	tcccagctct	cagggttgac	tctgttccat	cctctgtgca	1440
aaatcctcct	gtgcttccct	ttggccctct	gtgctcttgt	ctggttttcc	ccagaaaactc	1500
tcaccctcac	tccatctccc	actgcggtct	aacaaatctc	ctttcgtctc	tcagaacggg	1560
tcttgcaagg	agtttgggta	tgtcattcat	tttccttagt	gtaaaactag	cacgttgccc	1620
gcttcccttc	acattagaaa	acaagatcag	cctgtgcaac	atggtgaaac	ctcatctcta	1680
ccaacaaaac	aaaaaaacac	aaaaatttag	caggtgtggt	ggtgcacccc	tatactccca	1740
gcaactcggg	gggctgaggt	gggagaatgg	cttgagcctg	ggaggcagag	gttgacagtga	1800

gctgagatca	caccactgca	ctctagctcg	ggtgacgaag	cctgaccttg	tctcaaaaaa	1850
tacaggggatg	aatatgtcaa	ttaccctgat	ttgatcatag	cacgttgtat	acatgtactg	1920
caatattgct	gtccacccca	taaatatgta	caattatgta	tacattttta	aaatcataaa	1980
aataagataa	tgaaaaaaa	aaaaaaaaa	aaaaaaagg	cgggccgcta	gactagtcta	2040
gagaaca						2047

<210> 2
 <211> 1017
 <212> DNA
 <213> Homo sapiens

<400> 2						
atgtctccat	ccccgaccgc	cctctttctgt	cttgggctgt	gtctggggcg	tgtgccagcg	60
cagagtggac	cgctcccaaa	gccctccctc	caggtctctgc	ccagctccct	ggtgcccttg	120
gagaagccag	tgaccctccg	gtgccaggga	cctccgggcg	tggacctgta	ccgcctggag	180
aagctgagtt	ccagcaggta	ccaggatcag	gcagtccctc	tcaccccggc	catgaagaga	240
agtctggctg	gacgtaccg	ctgctcctac	cagaacggaa	gcctctggtc	cctgcccagc	300
gaccagctgg	agctcgttgc	cacgggagtt	tttgccaaac	cctcgtctc	agcccagccc	360
ggcccggcgg	tgtcgtcagg	aggggacgta	accctacagt	gtcagactcg	gtatggcttt	420
gaccaatttg	ctctgtacaa	ggaaggggac	cctgcgcctc	acaagaatcc	cgagagatgg	480
taccgggcta	gtttcccat	catcacggtg	accgcgcgcc	acagcggaac	ctaccgatgc	540
tacagcttct	ccagcaggga	cccatacctg	tggtcggccc	ccagcgaccc	cctggagctt	600
gtggtcacag	gaacctctgt	gacccccagc	cggttaccaa	cagaaccacc	ttcctcggtg	660
gcagaattct	cagaagccac	cgctgaactg	accgtctcat	tcacaaacaa	agtcttcaca	720
actgagactt	ctaggagtat	caccaccagt	ccaaaggagt	cagactctcc	agctggtcct	780
gcccggcagt	actacaccaa	gggcaacctg	gtccggatat	gcctcggggc	tgtgatccta	840
ataatcctgg	cgggggtttct	ggcagaggac	tggcacagcc	ggaggaagcg	cctgcggcac	900
aggggcaggg	ctgtgcagag	gccgcttccg	ccctcgccgc	ccctcccgca	gacccggaaa	960
tcacacgggg	gtcaggatgg	aggccgacag	gatgttcaca	gccgcgggtt	atgttca	1017

<210> 3
 <211> 339
 <212> PRT
 <213> Homo sapiens

<400> 3																	
Met	Ser	Pro	Ser	Pro	Thr	Ala	Leu	Phe	Cys	Leu	Gly	Leu	Cys	Leu	Gly		
1				5					10					15			
Arg	Val	Pro	Ala	Gln	Ser	Gly	Pro	Leu	Pro	Lys	Pro	Ser	Leu	Gln	Ala		
			20					25					30				
Leu	Pro	Ser	Ser	Leu	Val	Pro	Leu	Glu	Lys	Pro	Val	Thr	Leu	Arg	Cys		
			35				40					45					
Gln	Gly	Pro	Pro	Gly	Val	Asp	Leu	Tyr	Arg	Leu	Glu	Lys	Leu	Ser	Ser		
			50			55					60						
Ser	Arg	Tyr	Gln	Asp	Gln	Ala	Val	Leu	Phe	Ile	Pro	Ala	Met	Lys	Arg		
65					70				75					80			
Ser	Leu	Ala	Gly	Arg	Tyr	Arg	Cys	Ser	Tyr	Gln	Asn	Gly	Ser	Leu	Trp		
			85					90					95				
Ser	Leu	Pro	Ser	Asp	Gln	Leu	Glu	Leu	Val	Ala	Thr	Gly	Val	Phe	Ala		
			100					105					110				
Lys	Pro	Ser	Leu	Ser	Ala	Gln	Pro	Gly	Pro	Ala	Val	Ser	Ser	Gly	Gly		
			115				120						125				
Asp	Val	Thr	Leu	Gln	Cys	Gln	Thr	Arg	Tyr	Gly	Phe	Asp	Gln	Phe	Ala		
			130			135					140						
Leu	Tyr	Lys	Glu	Gly	Asp	Pro	Ala	Pro	Tyr	Lys	Asn	Pro	Glu	Arg	Trp		
145					150				155					160			
Tyr	Arg	Ala	Ser	Phe	Pro	Ile	Ile	Thr	Val	Thr	Ala	Ala	His	Ser	Gly		
			165					170						175			

Thr	Tyr	Arg	Cys	Tyr	Ser	Phe	Ser	Ser	Arg	Asp	Pro	Tyr	Leu	Trp	Ser
			180					185					190		
Ala	Pro	Ser	Asp	Pro	Leu	Glu	Leu	Val	Val	Thr	Gly	Thr	Ser	Val	Thr
		195					200					205			
Pro	Ser	Arg	Leu	Pro	Thr	Glu	Pro	Pro	Ser	Ser	Val	Ala	Glu	Phe	Ser
	210					215					220				
Glu	Ala	Thr	Ala	Glu	Leu	Thr	Val	Ser	Phe	Thr	Asn	Lys	Val	Phe	Thr
225					230					235					240
Thr	Glu	Thr	Ser	Arg	Ser	Ile	Thr	Thr	Ser	Pro	Lys	Glu	Ser	Asp	Ser
			245						250					255	
Pro	Ala	Gly	Pro	Ala	Arg	Gln	Tyr	Tyr	Thr	Lys	Gly	Asn	Leu	Val	Arg
		260					265						270		
Ile	Cys	Leu	Gly	Ala	Val	Ile	Leu	Ile	Ile	Leu	Ala	Gly	Phe	Leu	Ala
	275					280						285			
Glu	Asp	Trp	His	Ser	Arg	Arg	Lys	Arg	Leu	Arg	His	Arg	Gly	Arg	Ala
290						295					300				
Val	Gln	Arg	Pro	Leu	Pro	Pro	Leu	Pro	Pro	Leu	Pro	Gln	Thr	Arg	Lys
305					310					315					320
Ser	His	Gly	Gly	Gln	Asp	Gly	Gly	Arg	Gln	Asp	Val	His	Ser	Arg	Gly
				325					330					335	
Leu	Cys	Ser													

<210> 4
 <211> 20
 <212> PRT
 <213> Homo sapiens

<400> 4
 Met Ser Pro Ser Pro Thr Ala Leu Phe Cys Leu Gly Leu Cys Leu Gly
 1 5 10 15
 Arg Val Pro Ala
 20

<210> 5
 <211> 319
 <212> PRT
 <213> Homo sapiens

<400> 5
 Gln Ser Gly Pro Leu Pro Lys Pro Ser Leu Gln Ala Leu Pro Ser Ser
 1 5 10 15
 Leu Val Pro Leu Glu Lys Pro Val Thr Leu Arg Cys Gln Gly Pro Pro
 20 25 30
 Gly Val Asp Leu Tyr Arg Leu Glu Lys Leu Ser Ser Ser Arg Tyr Gln
 35 40 45
 Asp Gln Ala Val Leu Phe Ile Pro Ala Met Lys Arg Ser Leu Ala Gly
 50 55 60
 Arg Tyr Arg Cys Ser Tyr Gln Asn Gly Ser Leu Trp Ser Leu Pro Ser
 65 70 75 80
 Asp Gln Leu Glu Leu Val Ala Thr Gly Val Phe Ala Lys Pro Ser Leu
 85 90 95
 Ser Ala Gln Pro Gly Pro Ala Val Ser Ser Gly Gly Asp Val Thr Leu
 100 105 110
 Gln Cys Gln Thr Arg Tyr Gly Phe Asp Gln Phe Ala Leu Tyr Lys Glu
 115 120 125
 Gly Asp Pro Ala Pro Tyr Lys Asn Pro Glu Arg Trp Tyr Arg Ala Ser
 130 135 140

Phe	Pro	Ile	Ile	Thr	Val	Thr	Ala	Ala	His	Ser	Gly	Thr	Tyr	Arg	Cys
145					150					155					160
Tyr	Ser	Phe	Ser	Ser	Arg	Asp	Pro	Tyr	Leu	Trp	Ser	Ala	Pro	Ser	Asp
			165						170					175	
Pro	Leu	Glu	Leu	Val	Val	Thr	Gly	Thr	Ser	Val	Thr	Pro	Ser	Arg	Leu
			180					185				190			
Pro	Thr	Glu	Pro	Pro	Ser	Ser	Val	Ala	Glu	Phe	Ser	Glu	Ala	Thr	Ala
		195					200					205			
Glu	Leu	Thr	Val	Ser	Phe	Thr	Asn	Lys	Val	Phe	Thr	Thr	Glu	Thr	Ser
	210					215					220				
Arg	Ser	Ile	Thr	Thr	Ser	Pro	Lys	Glu	Ser	Asp	Ser	Pro	Ala	Gly	Pro
225					230					235					240
Ala	Arg	Gln	Tyr	Tyr	Thr	Lys	Gly	Asn	Leu	Val	Arg	Ile	Cys	Leu	Gly
			245					250					255		
Ala	Val	Ile	Leu	Ile	Ile	Leu	Ala	Gly	Phe	Leu	Ala	Glu	Asp	Trp	His
		260					265					270			
Ser	Arg	Arg	Lys	Arg	Leu	Arg	His	Arg	Gly	Arg	Ala	Val	Gln	Arg	Pro
	275					280					285				
Leu	Pro	Pro	Leu	Pro	Pro	Leu	Pro	Gln	Thr	Arg	Lys	Ser	His	Gly	Gly
	290				295					300					
Gln	Asp	Gly	Gly	Arg	Gln	Asp	Val	His	Ser	Arg	Gly	Leu	Cys	Ser	
305					310				315						

<210> 6
 <211> 41
 <212> PRT
 <213> Homo sapiens

<400> 6															
Cys	Gln	Gly	Pro	Pro	Gly	Val	Asp	Leu	Tyr	Arg	Leu	Glu	Lys	Leu	Ser
1			5					10					15		
Ser	Ser	Arg	Tyr	Gln	Asp	Gln	Ala	Val	Leu	Phe	Ile	Pro	Ala	Met	Lys
		20				25						30			
Arg	Ser	Leu	Ala	Gly	Arg	Tyr	Arg	Cys							
	35					40									

<210> 7
 <211> 47
 <212> PRT
 <213> Homo sapiens

<400> 7															
Cys	Gln	Thr	Arg	Tyr	Gly	Phe	Asp	Gln	Phe	Ala	Leu	Tyr	Lys	Glu	Gly
1			5					10					15		
Asp	Pro	Ala	Pro	Tyr	Lys	Asn	Pro	Glu	Arg	Trp	Tyr	Arg	Ala	Ser	Phe
		20				25					30				
Pro	Ile	Ile	Thr	Val	Thr	Ala	Ala	His	Ser	Gly	Thr	Tyr	Arg	Cys	
	35					40					45				

<210> 8
 <211> 19
 <212> PRT
 <213> Homo sapiens

<400> 8															
Leu	Val	Arg	Ile	Cys	Leu	Gly	Ala	Val	Ile	Leu	Ile	Ile	Leu	Ala	Gly
1			5					10					15		
Phe	Leu	Ala													

<210> 9
 <211> 249
 <212> PRT
 <213> Homo sapiens

<400> 9
 Gln Ser Gly Pro Leu Pro Lys Pro Ser Leu Gln Ala Leu Pro Ser Ser
 1 5 10 15
 Leu Val Pro Leu Glu Lys Pro Val Thr Leu Arg Cys Gln Gly Pro Pro
 20 25 30
 Gly Val Asp Leu Tyr Arg Leu Glu Lys Leu Ser Ser Ser Arg Tyr Gln
 35 40 45
 Asp Gln Ala Val Leu Phe Ile Pro Ala Met Lys Arg Ser Leu Ala Gly
 50 55 60
 Arg Tyr Arg Cys Ser Tyr Gln Asn Gly Ser Leu Trp Ser Leu Pro Ser
 65 70 75 80
 Asp Gln Leu Glu Leu Val Ala Thr Gly Val Phe Ala Lys Pro Ser Leu
 85 90 95
 Ser Ala Gln Pro Gly Pro Ala Val Ser Ser Gly Gly Asp Val Thr Leu
 100 105 110
 Gln Cys Gln Thr Arg Tyr Gly Phe Asp Gln Phe Ala Leu Tyr Lys Glu
 115 120 125
 Gly Asp Pro Ala Pro Tyr Lys Asn Pro Glu Arg Trp Tyr Arg Ala Ser
 130 135 140
 Phe Pro Ile Ile Thr Val Thr Ala Ala His Ser Gly Thr Tyr Arg Cys
 145 150 155 160
 Tyr Ser Phe Ser Ser Arg Asp Pro Tyr Leu Trp Ser Ala Pro Ser Asp
 165 170 175
 Pro Leu Glu Leu Val Val Thr Gly Thr Ser Val Thr Pro Ser Arg Leu
 180 185 190
 Pro Thr Glu Pro Pro Ser Ser Val Ala Glu Phe Ser Glu Ala Thr Ala
 195 200 205
 Glu Leu Thr Val Ser Phe Thr Asn Lys Val Phe Thr Thr Glu Thr Ser
 210 215 220
 Arg Ser Ile Thr Thr Ser Pro Lys Glu Ser Asp Ser Pro Ala Gly Pro
 225 230 235 240
 Ala Arg Gln Tyr Tyr Thr Lys Gly Asn
 245

<210> 10
 <211> 51
 <212> PRT
 <213> Homo sapiens

<400> 10
 Glu Asp Trp His Ser Arg Arg Lys Arg Leu Arg His Arg Gly Arg Ala
 1 5 10 15
 Val Gln Arg Pro Leu Pro Pro Leu Pro Pro Leu Pro Gln Thr Arg Lys
 20 25 30
 Ser His Gly Gly Gln Asp Gly Gly Arg Gln Asp Val His Ser Arg Gly
 35 40 45
 Leu Cys Ser
 50

<210> 11
 <211> 2170

<212> DNA
<213> Homo sapiens

<400> 11

ctgagggctc	atccctctgc	agagcgcggg	gtcaccggga	ggagacgcca	tgacgcccgc	60
cctcacagcc	ctgctctgcc	ttgggctgag	tctgggcccc	aggacccgcg	tgcaggcagg	120
gcccttcccc	aaacccaccc	tctgggctga	gccaggctct	gtgatcagct	gggggagccc	180
cgtgaccatc	tggtgtcagg	ggagcctgga	ggcccaggag	taccgactgg	ataaagaggg	240
aagcccagag	cccttggaca	gaaataaccc	actggaaccc	aagaacaagg	ccagattctc	300
catcccatcc	atgacagagc	accatgcggg	gagataccgc	tgccactatt	acagctctgc	360
aggctggtca	gagcccagcg	accccttgga	gctggtgatg	acaggattct	acaacaaacc	420
caccctctca	gccctgcccc	gccctgtggt	ggcctcaggg	gggaatatga	ccctccgatg	480
tggtcacag	aagggatatc	accattttgt	tctgatgaag	gaaggagaac	accagctccc	540
ccggaccctg	gactcacagc	agctccacag	tgggggggtc	caggccctgt	tcctctgtgg	600
ccccgtgaac	cccagccaca	ggtggagggt	cacatgctat	tactattata	tgaacacccc	660
ccagggtgtg	tcccaccccc	gtgacccctt	ggagattctg	ccctcaggcg	tgtctaggaa	720
gccctccctc	ctgaccctgc	agggccctgt	cctggccctt	gggcagagcc	tgaccctcca	780
gtgtggctct	gatgtcggct	acgacagatt	tgttctgtat	aaggaggggg	aacgtgactt	840
cctccagcgc	cctggccagc	agccccaggc	tgggctctcc	caggccaact	tcacctggg	900
ccctgtgagc	ccctcccacg	ggggccagta	cagggtgctat	ggtgcacaca	acctctcctc	960
cgagtggctg	gccccagcg	acccctgaa	catcctgatg	gcaggacaga	tctatgacac	1020
cgtctccctg	tcagcacagc	cgggccccac	agtggcctca	ggagagaaac	tgaccctgct	1080
gtgtcagtea	tggtggcagt	ttgacacttt	ccttctgacc	aaagaagggg	cagcccatcc	1140
cccactgcgt	ctgagatcaa	tgtacggagc	tcataagtac	caggctgaat	tccccatgag	1200
tctgtgacc	tcagcccacg	cggggacctc	cagggtgctac	ggctcataca	gctccaaccc	1260
ccacctgctg	tctttcccca	gtgagccctt	ggaactcatg	gtctcaggac	actctggagg	1320
ctccagcctc	ccacccacag	ggcgcctctc	cacacctggt	ctgggaagat	acctggaggt	1380
tttgattggg	gtctcgggtg	ccttcgtcct	gctgctcttc	ctcctcctct	tcctcctcct	1440
ccgacgtcag	cgtcacagca	aacacaggac	atctgaccag	agaaagactg	atttccagcg	1500
tcttgcaggg	gctgcggaga	cagagcccaa	ggacaggggc	ctgctgagga	ggtccagccc	1560
agctgctgac	gtccaggaag	aaaacctcta	tgttgcctgt	aaggacacac	agtctgagga	1620
cagggtggag	ctggacagtc	agagcccaca	cgatgaagac	ccccaggcag	tgacgtatgc	1680
cccgtgaaa	cactccagtc	ctaggagaga	aatggcctct	cctccctcct	cactgtctgg	1740
ggaattcctg	gacacaaagg	acagacaggt	ggaagaggac	aggcagatgg	acactgaggc	1800
tgctgcatct	gaagcctccc	aggatgtgac	ctacgcccag	ctgcacagct	tgacccttag	1860
acggaaggca	actgagcctc	ctccatccca	ggaaggggaa	cctccagctg	agcccagcat	1920
ctacgccact	ctggccatcc	actagcccgg	ggggtacgca	gacccacac	tcagcagaag	1980
gagactcagg	actgctgaag	gcacgggagc	tgccccagct	ggacaccagt	gaacccagct	2040
cagcctggac	ccctaacaca	gacctatgag	agacgctggg	aacttgtggg	actcacctga	2100
ctcaaagatg	actaatatcg	tcccattttg	gaaataaagc	aacagacttc	tcaacaatca	2160
atgagttaat						2170

<210> 12
<211> 631
<212> PRT
<213> Homo sapiens

<400> 12

Met	Thr	Pro	Ala	Leu	Thr	Ala	Leu	Leu	Cys	Leu	Gly	Leu	Ser	Leu	Gly
1				5				10						15	
Pro	Arg	Thr	Arg	Val	Gln	Ala	Gly	Pro	Phe	Pro	Lys	Pro	Thr	Leu	Trp
			20				25						30		
Ala	Glu	Pro	Gly	Ser	Val	Ile	Ser	Trp	Gly	Ser	Pro	Val	Thr	Ile	Trp
		35				40					45				
Cys	Gln	Gly	Ser	Leu	Glu	Ala	Gln	Glu	Tyr	Arg	Leu	Asp	Lys	Glu	Gly
	50				55					60					
Ser	Pro	Glu	Pro	Leu	Asp	Arg	Asn	Asn	Pro	Leu	Glu	Pro	Lys	Asn	Lys
65				70					75					80	

Ala	Arg	Phe	Ser	Ile	Pro	Ser	Met	Thr	Glu	His	His	Ala	Gly	Arg	Tyr	85	90	95
Arg	Cys	His	Tyr	Tyr	Ser	Ser	Ala	Gly	Trp	Ser	Glu	Pro	Ser	Asp	Pro	100	105	110
Leu	Glu	Leu	Val	Met	Thr	Gly	Phe	Tyr	Asn	Lys	Pro	Thr	Leu	Ser	Ala	115	120	125
Leu	Pro	Ser	Pro	Val	Val	Ala	Ser	Gly	Gly	Asn	Met	Thr	Leu	Arg	Cys	130	135	140
Gly	Ser	Gln	Lys	Gly	Tyr	His	His	Phe	Val	Leu	Met	Lys	Glu	Gly	Glu	145	150	155
His	Gln	Leu	Pro	Arg	Thr	Leu	Asp	Ser	Gln	Gln	Leu	His	Ser	Gly	Gly	165	170	175
Phe	Gln	Ala	Leu	Phe	Pro	Val	Gly	Pro	Val	Asn	Pro	Ser	His	Arg	Trp	180	195	190
Arg	Phe	Thr	Cys	Tyr	Tyr	Tyr	Tyr	Met	Asn	Thr	Pro	Gln	Val	Trp	Ser	195	200	205
His	Pro	Ser	Asp	Pro	Leu	Glu	Ile	Leu	Pro	Ser	Gly	Val	Ser	Arg	Lys	210	215	220
Pro	Ser	Leu	Leu	Thr	Leu	Gln	Gly	Pro	Val	Leu	Ala	Pro	Gly	Gln	Ser	225	230	235
Leu	Thr	Leu	Gln	Cys	Gly	Ser	Asp	Val	Gly	Tyr	Asp	Arg	Phe	Val	Leu	245	250	255
Tyr	Lys	Glu	Gly	Glu	Arg	Asp	Phe	Leu	Gln	Arg	Pro	Gly	Gln	Gln	Pro	260	265	270
Gln	Ala	Gly	Leu	Ser	Gln	Ala	Asn	Phe	Thr	Leu	Gly	Pro	Val	Ser	Pro	275	280	285
Ser	His	Gly	Gly	Gln	Tyr	Arg	Cys	Tyr	Gly	Ala	His	Asn	Leu	Ser	Ser	290	295	300
Glu	Trp	Ser	Ala	Pro	Ser	Asp	Pro	Leu	Asn	Ile	Leu	Met	Ala	Gly	Gln	305	310	315
Ile	Tyr	Asp	Thr	Val	Ser	Leu	Ser	Ala	Gln	Pro	Gly	Pro	Thr	Val	Ala	325	330	335
Ser	Gly	Glu	Asn	Val	Thr	Leu	Leu	Cys	Gln	Ser	Trp	Trp	Gln	Phe	Asp	340	345	350
Thr	Phe	Leu	Leu	Thr	Lys	Glu	Gly	Ala	Ala	His	Pro	Pro	Leu	Arg	Leu	355	360	365
Arg	Ser	Met	Tyr	Gly	Ala	His	Lys	Tyr	Gln	Ala	Glu	Phe	Pro	Met	Ser	370	375	380
Pro	Val	Thr	Ser	Ala	His	Ala	Gly	Thr	Tyr	Arg	Cys	Tyr	Gly	Ser	Tyr	385	390	395
Ser	Ser	Asn	Pro	His	Leu	Leu	Ser	Phe	Pro	Ser	Glu	Pro	Leu	Glu	Leu	405	410	415
Met	Val	Ser	Gly	His	Ser	Gly	Gly	Ser	Ser	Leu	Pro	Pro	Thr	Gly	Pro	420	425	430
Pro	Ser	Thr	Pro	Gly	Leu	Gly	Arg	Tyr	Leu	Glu	Val	Leu	Ile	Gly	Val	435	440	445
Ser	Val	Ala	Phe	Val	Leu	Leu	Phe	Leu	Leu	Leu	Phe	Leu	Leu	Leu	Leu	450	455	460
Arg	Arg	Gln	Arg	His	Ser	Lys	His	Arg	Thr	Ser	Asp	Gln	Arg	Lys	Thr	465	470	475
Asp	Phe	Gln	Arg	Pro	Ala	Gly	Ala	Ala	Glu	Thr	Glu	Pro	Lys	Asp	Arg	485	490	495
Gly	Leu	Leu	Arg	Arg	Ser	Ser	Pro	Ala	Ala	Asp	Val	Gln	Glu	Glu	Asn	500	505	510
Leu	Tyr	Ala	Ala	Val	Lys	Asp	Thr	Gln	Ser	Glu	Asp	Arg	Val	Glu	Leu	515	520	525
Asp	Ser	Gln	Ser	Pro	His	Asp	Glu	Asp	Pro	Gln	Ala	Val	Thr	Tyr	Ala	530	535	540

Pro Val Lys His Ser Ser Pro Arg Arg Glu Met Ala Ser Pro Pro Ser
 545 550 555 560
 Ser Leu Ser Gly Glu Phe Leu Asp Thr Lys Asp Arg Gln Val Glu Glu
 565 570 575
 Asp Arg Gln Met Asp Thr Glu Ala Ala Ser Glu Ala Ser Gln Asp
 580 585 590
 Val Thr Tyr Ala Gln Leu His Ser Leu Thr Leu Arg Arg Lys Ala Thr
 595 600 605
 Glu Pro Pro Pro Ser Gln Glu Gly Glu Pro Pro Ala Glu Pro Ser Ile
 610 615 620
 Tyr Ala Thr Leu Ala Ile His
 625 630

<210> 13
 <211> 50
 <212> PRT
 <213> Homo sapiens

<400> 13
 Gly Gln Ser Val Ile Leu Arg Cys Gln Gly Pro Pro Asp Val Asp Leu
 1 5 10 15
 Tyr Arg Leu Glu Lys Leu Lys Pro Glu Lys Tyr Glu Asp Gln Asp Phe
 20 25 30
 Leu Phe Ile Pro Thr Met Glu Arg Ser Asn Ala Gly Arg Tyr Arg Cys
 35 40 45
 Ser Tyr
 50

<210> 14
 <211> 1163
 <212> DNA
 <213> Mus musculus

<400> 14
 gagtcgaccc acgcgtccgc ttccctgctt ggccacatag ctcaggactg ggttgacagaa 60
 ccatgtctcc agcctcacc cttttcttct gtattgggct gtgtgtactg caagtgatec 120
 aaacacagag tggccactc cccaagcctt cctccaggc tcagcccagt tccctgggtac 180
 ccttgggtca gtcagttatt ctgaggtgcc agggacctcc agatgtggat ttatatcgcc 240
 tggagaaact gaaaccggag aagtatgaag atcaagactt tctcttcatt ccaaccatgg 300
 aaagaagtaa tgctggacgg tatcgatgct cttatcagaa tgggagtcac tgggtctctcc 360
 caagtgacca gcttgagcta attgctacag gtgtgtatgc taaaccctca ctctcagctc 420
 atcccagctc agcagtcctt caaggcaggg atgtgactct gaagtgccag agcccataca 480
 gttttgatga attcgttcta tacaaagaag gggatactgg gccttataag agacctgaga 540
 aatgggtaccg ggccaatttc cccatcatca cagtgaactg tgcacacagt gggacgtacc 600
 ggtgttacag cttctccagc tcctctccat acctgtgggc agccccgagt gacctctag 660
 tgcttgtggt tactggactc tctgccactc ccagccaggt acccacggaa gaatcatttc 720
 ctgtgacaga atcctccagg agaccttcca tcttaccac aaacaaaata tctacaactg 780
 aaaagcctat gaatatcact gcctctccag aggggctgag cctccaatt ggttttgctc 840
 atcagcacta tgccaagggg aatctgggtc ggatatgctt tgggtgccacg attataataa 900
 ttttgttggg gcttctagca gaggattggc acagtgggaa gaaatgcctg caacacagga 960
 tgagagcttt gcaaaggcca ctaccacccc tccactggc ctagaaataa cttggctttc 1020
 agcagagggg ttgaccagac atccatgcac aaccatggac atcaccacta gagccacaga 1080
 catggacata ctcaagagtg gggaggttat ataaaaaaat gagtgtggag aataaatgca 1140
 gagccaacaa ggtgaaaaaa aaa 1163

<210> 15
 <211> 939
 <212> DNA

<213> Mus musculus

<400> 15

atgtctccag	cctcaccac	tttcttctgt	attgggctgt	gtgtactgca	agtgatccaa	60
acacagagt	gcccactccc	caagccttcc	ctccaggctc	agcccagttc	cctgggtaccc	120
ctgggtcagt	cagttattct	gaggtgccag	ggacctccag	atgtggattt	atatcgcttg	180
gagaaactga	aaccggagaa	gtatgaagat	caagactttc	tcttcattcc	aaccatggaa	240
agaagtaatg	ctggacggta	tcgatgctct	tatcagaatg	ggagtcactg	gtctctccca	300
agtgaccagc	ttgagcta	tgctacaggt	gtgtatgcta	aacctcact	ctcagctcat	360
cccagctcag	cagtcctcca	aggcagggat	gtgactctga	agtgccagag	cccatacagt	420
tttgatgaat	tcgttctata	caaagaaggg	gatactgggc	cttataagag	acctgagaaa	480
tgggtaccggg	ccaatttccc	catcatcaca	gtgactgctg	ctcacagtgg	gacgtaccgg	540
tgttacagct	tctccagctc	atctccatac	ctgtggtcag	ccccgagtga	ccctctagt	600
cttgtgggta	ctggactctc	tgccactccc	agccagggtac	ccacggaaga	atcatttcc	660
gtgacagaat	cctccaggag	accttccatc	ttaccacaaa	acaaaatata	tacaactgaa	720
aagcctatga	atatcactgc	ctctccagag	gggctgagcc	ctccaattgg	ttttgctcat	780
cagcactatg	ccaaggggaa	tctgggtcgg	atatgccttg	gtgccacagt	tataataatt	840
ttgttggggc	ttctagcaga	ggattggcac	agtcggaaga	aatgcctgca	acacaggatg	900
agagctttgc	aaaggccact	accacccctc	ccactggcc			939

<210> 15

<211> 313

<212> PRT

<213> Mus musculus

<400> 15

Met	Ser	Pro	Ala	Ser	Pro	Thr	Phe	Phe	Cys	Ile	Gly	Leu	Cys	Val	Leu
1				5					10					15	
Gln	Val	Ile	Gln	Thr	Gln	Ser	Gly	Pro	Leu	Pro	Lys	Pro	Ser	Leu	Gln
			20					25					30		
Ala	Gln	Pro	Ser	Ser	Leu	Val	Pro	Leu	Gly	Gln	Ser	Val	Ile	Leu	Arg
			35					40					45		
Cys	Gln	Gly	Pro	Pro	Asp	Val	Asp	Leu	Tyr	Arg	Leu	Glu	Lys	Leu	Lys
			50			55					60				
Pro	Glu	Lys	Tyr	Glu	Asp	Gln	Asp	Phe	Leu	Phe	Ile	Pro	Thr	Met	Glu
					70					75					80
Arg	Ser	Asn	Ala	Gly	Arg	Tyr	Arg	Cys	Ser	Tyr	Gln	Asn	Gly	Ser	His
					85					90				95	
Trp	Ser	Leu	Pro	Ser	Asp	Gln	Leu	Glu	Leu	Ile	Ala	Thr	Gly	Val	Tyr
			100					105					110		
Ala	Lys	Pro	Ser	Leu	Ser	Ala	His	Pro	Ser	Ser	Ala	Val	Pro	Gln	Gly
			115				120					125			
Arg	Asp	Val	Thr	Leu	Lys	Cys	Gln	Ser	Pro	Tyr	Ser	Phe	Asp	Glu	Phe
			130				135					140			
Val	Leu	Tyr	Lys	Glu	Gly	Asp	Thr	Gly	Pro	Tyr	Lys	Arg	Pro	Glu	Lys
					150					155				160	
Trp	Tyr	Arg	Ala	Asn	Phe	Pro	Ile	Ile	Thr	Val	Thr	Ala	Ala	His	Ser
				165					170					175	
Gly	Thr	Tyr	Arg	Cys	Tyr	Ser	Phe	Ser	Ser	Ser	Ser	Pro	Tyr	Leu	Trp
			180					185					190		
Ser	Ala	Pro	Ser	Asp	Pro	Leu	Val	Leu	Val	Val	Thr	Gly	Leu	Ser	Ala
			195				200					205			
Thr	Pro	Ser	Gln	Val	Pro	Thr	Glu	Glu	Ser	Phe	Pro	Val	Thr	Glu	Ser
			210				215					220			
Ser	Arg	Arg	Pro	Ser	Ile	Leu	Pro	Thr	Asn	Lys	Ile	Ser	Thr	Thr	Glu
					230					235					240
Lys	Pro	Met	Asn	Ile	Thr	Ala	Ser	Pro	Glu	Gly	Leu	Ser	Pro	Pro	Ile
				245						250				255	

Gly Phe Ala His Gln His Tyr Ala Lys Gly Asn Leu Val Arg Ile Cys
260 265 270
Leu Gly Ala Thr Ile Ile Ile Ile Leu Leu Gly Leu Leu Ala Glu Asp
275 280 285
Trp His Ser Arg Lys Lys Cys Leu Gln His Arg Met Arg Ala Leu Gln
290 295 300
Arg Pro Leu Pro Pro Leu Pro Leu Ala
305 310

<210> 17
<211> 21
<212> PRT
<213> Mus musculus

<400> 17
Met Ser Pro Ala Ser Pro Thr Phe Phe Cys Ile Gly Leu Cys Val Leu
1 5 10 15
Gln Val Ile Gln Thr
20

<210> 18
<211> 292
<212> PRT
<213> Mus musculus

<400> 18
Gln Ser Gly Pro Leu Pro Lys Pro Ser Leu Gln Ala Gln Pro Ser Ser
1 5 10 15
Leu Val Pro Leu Gly Gln Ser Val Ile Leu Arg Cys Gln Gly Pro Pro
20 25 30
Asp Val Asp Leu Tyr Arg Leu Glu Lys Leu Lys Pro Glu Lys Tyr Glu
35 40 45
Asp Gln Asp Phe Leu Phe Ile Pro Thr Met Glu Arg Ser Asn Ala Gly
50 55 60
Arg Tyr Arg Cys Ser Tyr Gln Asn Gly Ser His Trp Ser Leu Pro Ser
65 70 75 80
Asp Gln Leu Glu Leu Ile Ala Thr Gly Val Tyr Ala Lys Pro Ser Leu
85 90 95
Ser Ala His Pro Ser Ser Ala Val Pro Gln Gly Arg Asp Val Thr Leu
100 105 110
Lys Cys Gln Ser Pro Tyr Ser Phe Asp Glu Phe Val Leu Tyr Lys Glu
115 120 125
Gly Asp Thr Gly Pro Tyr Lys Arg Pro Glu Lys Trp Tyr Arg Ala Asn
130 135 140
Phe Pro Ile Ile Thr Val Thr Ala Ala His Ser Gly Thr Tyr Arg Cys
145 150 155 160
Tyr Ser Phe Ser Ser Ser Ser Pro Tyr Leu Trp Ser Ala Pro Ser Asp
165 170 175
Pro Leu Val Leu Val Val Thr Gly Leu Ser Ala Thr Pro Ser Gln Val
180 185 190
Pro Thr Glu Glu Ser Phe Pro Val Thr Glu Ser Ser Arg Arg Pro Ser
195 200 205
Ile Leu Pro Thr Asn Lys Ile Ser Thr Thr Glu Lys Pro Met Asn Ile
210 215 220
Thr Ala Ser Pro Glu Gly Leu Ser Pro Pro Ile Gly Phe Ala His Gln
225 230 235 240
His Tyr Ala Lys Gly Asn Leu Val Arg Ile Cys Leu Gly Ala Thr Ile
245 250 255

Ile Ile Ile Leu Leu Gly Leu Leu Ala Glu Asp Trp His Ser Arg Lys
260 265 270
Lys Cys Leu Gln His Arg Met Arg Ala Leu Gln Arg Pro Leu Pro Pro
275 280 285
Leu Pro Leu Ala
290

<210> 19
<211> 267
<212> PRT
<213> Mus musculus

<400> 19
Met Ser Pro Ala Ser Pro Thr Phe Phe Cys Ile Gly Leu Cys Val Leu
1 5 10 15
Gln Val Ile Gln Thr Gln Ser Gly Pro Leu Pro Lys Pro Ser Leu Gln
20 25 30
Ala Gln Pro Ser Ser Leu Val Pro Leu Gly Gln Ser Val Ile Leu Arg
35 40 45
Cys Gln Gly Pro Pro Asp Val Asp Leu Tyr Arg Leu Glu Lys Leu Lys
50 55 60
Pro Glu Lys Tyr Glu Asp Gln Asp Phe Leu Phe Ile Pro Thr Met Glu
65 70 75 80
Arg Ser Asn Ala Gly Arg Tyr Arg Cys Ser Tyr Gln Asn Gly Ser His
85 90 95
Trp Ser Leu Pro Ser Asp Gln Leu Glu Leu Ile Ala Thr Gly Val Tyr
100 105 110
Ala Lys Pro Ser Leu Ser Ala His Pro Ser Ser Ala Val Pro Gln Gly
115 120 125
Arg Asp Val Thr Leu Lys Cys Gln Ser Pro Tyr Ser Phe Asp Glu Phe
130 135 140
Val Leu Tyr Lys Glu Gly Asp Thr Gly Pro Tyr Lys Arg Pro Glu Lys
145 150 155 160
Trp Tyr Arg Ala Asn Phe Pro Ile Ile Thr Val Thr Ala Ala His Ser
165 170 175
Gly Thr Tyr Arg Cys Tyr Ser Phe Ser Ser Ser Ser Pro Tyr Leu Trp
180 185 190
Ser Ala Pro Ser Asp Pro Leu Val Leu Val Val Thr Gly Leu Ser Ala
195 200 205
Thr Pro Ser Gln Val Pro Thr Glu Glu Ser Phe Pro Val Thr Glu Ser
210 215 220
Ser Arg Arg Pro Ser Ile Leu Pro Thr Asn Lys Ile Ser Thr Thr Glu
225 230 235 240
Lys Pro Met Asn Ile Thr Ala Ser Pro Glu Gly Leu Ser Pro Pro Ile
245 250 255
Gly Phe Ala His Gln His Tyr Ala Lys Gly Asn
260 265

<110> 20
<211> 19
<212> PRT
<213> Mus musculus

<400> 20
Leu Val Arg Ile Cys Leu Gly Ala Thr Ile Ile Ile Ile Leu Leu Gly
1 5 10 15
Leu Leu Ala

<210> 21
 <211> 27
 <212> PRT
 <213> Mus musculus

<400> 21
 Glu Asp Trp His Ser Arg Lys Lys Cys Leu Gln His Arg Met Arg Ala
 1 5 10 15
 Leu Gln Arg Pro Leu Pro Pro Leu Pro Leu Ala
 20 25

<210> 22
 <211> 41
 <212> PRT
 <213> Mus musculus

<400> 22
 Cys Gln Gly Pro Pro Asp Val Asp Leu Tyr Arg Leu Glu Lys Leu Lys
 1 5 10 15
 Pro Glu Lys Tyr Glu Asp Gln Asp Phe Leu Phe Ile Pro Thr Met Glu
 20 25 30
 Arg Ser Asn Ala Gly Arg Tyr Arg Cys
 35 40

<210> 23
 <211> 47
 <212> PRT
 <213> Mus musculus

<400> 23
 Cys Gln Ser Pro Tyr Ser Phe Asp Glu Phe Val Leu Tyr Lys Glu Gly
 1 5 10 15
 Asp Thr Gly Pro Tyr Lys Arg Pro Glu Lys Trp Tyr Arg Ala Asn Phe
 20 25 30
 Pro Ile Ile Thr Val Thr Ala Ala His Ser Gly Thr Tyr Arg Cys
 35 40 45

<210> 24
 <211> 1896
 <212> DNA
 <213> Homo sapiens

<400> 24
 atgaagcccc cctcacagc cctgctctgc cttgggctga gtctgggccc caggaccgcg 60
 gtgcaggcag ggcccttccc caaaccacc ctctgggctg agccaggctc tgtgatcagc 120
 tgggggagcc ccgtgaccat ctggtgtcag gggagcctgg aggccagga gtaccgactg 180
 gataaagagg gaagcccaga gcccttggac agaaataacc cactggaacc caagaacaag 240
 gccagattct ccatcccatc catgacagag caccatgcgg ggagataacc ctgccactat 300
 tacagctctg caggctggtc agagcccagc gaccctctgg agctggtgat gacaggattc 360
 tacaacaaac ccacctctc agccctgccc agccctgtgg tggcctcagg ggggaatatg 420
 accctccgat gtggctcaca gaaggatat caccattttg ttctgatgaa ggaaggagaa 480
 caccagctcc cccggacctt ggactcacag cagctccaca gtgggggggt ccaggccctg 540
 ttccctgtgg gccccgtgaa cccagccac aggtggaggt tcacatgcta ttactattat 600
 atgaacaccc cccagggtgt gtcccacccc agtgaccccc tggagattct gccctcaggc 660
 gtgtctagga agccctccct cctgaccctg cagggccctg tcctggcccc tgggcagagc 720
 ctgaccctcc agtggtggtc tgatgtcggc tacgacagat ttgtttctgta taaggagggg 780
 gaacgtgact tcctccagcg ccttgcccag cagccccagg ctgggctctc ccaggccaac 840
 ttcacctggt gccctgtgag cccctccac gggggccagt acaggtgcta tgggtgcacac 900

aacctctcct	ccgagtgggc	ggccccccagc	gacccccctga	acatcctgat	ggcaggacag	960
atctatgaca	ccgtctccct	gtcagcacag	ccggggcccca	cagtggcctc	aggagagaac	1020
gtgaccctgc	tgtgtcagtc	atggtggcag	tttgacactt	tccttctgac	caaagaaggg	1080
gcagcccatc	ccccactgcg	tctgagatca	atgtacggag	ctcataagta	ccaggctgaa	1140
ttccccatga	gtcctgtgac	ctcagccccc	gcggggacct	acaggtgcta	cggctcatac	1200
agctccaacc	cccacctgct	gtctttcccc	agtgagcccc	tggaactcat	ggtctcagga	1260
cactctggag	gctccagcct	cccacccaca	gggcgcacct	ccacacctgg	tctgggaaga	1320
tacctggagg	ttttgattgg	ggtctcggtg	gccttcgtcc	tgtgtctctt	cctcctcctc	1380
ttcctcctcc	tccgacgtca	gcgtcacagc	aaacacagga	catctgacca	gagaaagact	1440
gatttccagc	gtcctgcagg	ggctgcggag	acagagccca	aggacagggg	cctgctgagg	1500
aggtccagcc	cagctgctga	cgtccaggaa	gaaaacctct	atgctgccgt	gaaggacaca	1560
cagtctgagg	acagggtgga	gctggacagt	cagagcccac	acgatgaaga	cccccaggca	1620
gtgacgtatg	ccccggtgaa	acactccagt	cctaggagag	aaatggcctc	tcctccctcc	1680
tactgtctg	gggaattcct	ggacacaaaag	gacagacagg	tggaagagga	caggcagatg	1740
gacactgagg	ctgctgcatc	tgaagcctcc	caggatgtga	cctacgcccc	gctgcacagc	1800
ttgaccctta	gacggaaggc	aactgagcct	cctccatccc	aggaagggga	acctccagct	1860
gagcccagca	tctacgccac	tctggccatc	cactag			1896